REMARKS/ARGUMENTS

Claims 1-16 are currently pending and stand rejected.

Claims 1, 9, 13, and 14 are currently amended, and claim 17 is newly added.

Reconsideration of the claim rejections is requested in view of the above claim amendments and following remarks.

Claim Objections

Claim 6 is objected to for the reasons set forth on page 2 of the Office Action. It appears that this objection was asserted for informative purposes and no claim modification is necessarily required. In fact, the objection can be readily addressed by the Examiner at the close of prosecution by reordering and renumbering the final pending claims, as is typically done by the Examiners anyway to address "improper" claim sequence numbering that may result due to claims being cancelled, added, amended, etc., during prosecution. Withdrawal of the objection is thus requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-12 are rejected as being unpatentable over Haddock (U.S. Patent No. 6,678,248 in view of Metin (U.S. Patent Publication 2002/0031142). Applicants respectfully submit that claims 1 and 9 are patentable over the combination of Haddock and Metin.

With regard at least to claim 1, the combination of Haddock and Metin does not teach or fairly suggest, for example, a switch apparatus for providing reserved connections between end stations, wherein the switch is adapted to detect and forward packets that include requests for reserved connections according to a given reservation protocol, *wherein the switch is operable for determining whether there is sufficient bandwidth available to establish a reserved connection path within the network, and if so, establishing a reserved connection path and allocating the bandwidth for the reserved connection path*, as essentially claimed in claim 1.

Moreover, with regard to claim 9, the combination of Haddock and Metin does not teach or fairly suggest, at least, a switch comprising a *detector for detecting whether the received packet includes a request for a reserved connection according to a given reservation protocol, and an allocator responsive to the detection of a request for a reserved connection,*

for establishing a reserved connection path and for determining and allocating sufficient bandwidth for establishing the reserved connection path between the endpoints, as essentially recited in claim 9.

The Examiner acknowledges (on pages 3-4 and 6-7 of the Office Action) that Haddock does not disclose various features of claims 1 and 9. Indeed, the Examiner acknowledges that with regard to claims 1 and 9, Haddock does not teach a *switch that is capable of detecting packets that include requests for reserved connections* (see pages 3, 6 of the Office Action), and does not teach a switch having an allocator for, or which is otherwise capable of, *determining whether there is sufficient bandwidth to establish a reserved connection path within the network in response to a detected request for a reserved connection and allocating bandwidth sufficient for the requested reserved connection* (see, pages 4, 6 of the Office Action.) .

Instead, the Examiner relies on Metin (page. 4, paragraphs [0037] and [0040]) to cure the deficiencies of Haddock in this regard. In particular, the Examiner essentially asserts (on page 4 and 6-7) that Metin teaches (on page 4, paragraph [0037]) a packet switched network that uses RSVP which would carry packets that include requests for reserved connections, and further teaches (on p. 4, para [0040]) switches that can allocate and reserve resources if they are available The Examiner concludes (on page 4 of the Office Action) that it would have been obvious to modify Haddock with the switches of Metin that are able to process RSVP, so as to conform to network reservation protocols. However, Applicants respectfully assert that the Examiner's reliance on Metin is misplaced in this regard.

First, para. [0037] of Metin merely teaches that the Hosts A B and C in FIG. 2 of the switched network 8 are configured with protocol stacks to support TCP/IP and IETF Diffserv or Intserv QoS mechanisms such as RSVP, not the swithches. Indeed, Metin does not specifically disclose in para. [0037] that switches are capable of directly processing RSVP data packets. The fact that the switches may be included in a network having hosts or routers capable of processing RSVP packets is irrelevant, and not directly on point to the claimed inventions. Moreover, para [0040] of Metin generally teaches that a session between hosts A and C can be set up via a signaling protocol such as RSVP in a known manner.

Contrary to the Examiner's characterization of Metin, Metin does not expressly teach switch devices having embedded QoS features providing added functionality such as Resource Reservation Protocol (RSVP) signaling for admission control and reservation of

resources. In fact, Metin teaches methods for making using of VLAN protocols for defining different class of services for groups of transmitting and receiving hosts which are then managed in a particular manner to provide support for QoS guarantees, as described in para. [0036] of Metin:

> In a switch 1 embodying the invention, the transmitting and receiving hosts involved in particular data communications are assigned to logical groups represented by VLANs defined in the system. VLAN technology is a well known technology which facilitates administration of groups of hosts such that hosts can effectively communicate as if they were on the same LAN. The general mechanisms that allow implementation of VLANs in switched Ethernet networks are discussed in the IEEE 802.1 Q specification referenced earlier, and need not be discussed in detail here. Embodiments of the present invention make use of this technology for defining the groups of transmitting and receiving hosts which are then managed in a particular manner to provide support for QoS guarantees. In particular, within a switch 1 embodying the invention, each VLAN is associated with a QoS class defined in the switch. The QoS class determines the requirements for forwarding of data from VLANs in that class by forwarding component 3 under control of control logic 5. Data received from hosts in a given VLAN is then forwarded by the switch in accordance with the QoS class requirements. However, if the control logic determines (by means of a monitoring process discussed further below) that the ability to meet the forwarding requirements for data of a given QoS class is prejudiced in operation, then the control logic can deactivate one or more VLANS as necessary to maintain the required service level.

In this regard, Metin does not expressly teach switch devices having embedded QoS features providing added functionality such as Resource Reservation Protocol (RSVP) signaling for admission control and reservation of resources, and the Examiner has not specifically demonstrated how or where Metin teaches switch devices hat are able to process RSVP information. In fact, the Examiner contends that Metin's switches can "allocate and reserve resources if they are available", but this fails to address the specific claim language of "*determining whether there is sufficient bandwidth available to establish a reserved connection path within the network*",

Metin appears to be directed to a QoS framework where traffic is given relative precedence over other traffic in a network by using a plurality of classes of service (resource restrained class, normal class) where traffic within VLANs associated with the resource restrained class is forwarded with high priority, while traffic within VLANs associated with the Normal class is forwarded with low priority, namely the best effort system (see, para. [0038]). Moreover, Metin teaches in para. [0039] that the control logic 5 receives a session

request from a Host A and then identifies the participating hosts and the required resources, in particular the network bandwidth required for the session. If the session data is to be forwarded in accordance with the Resource Constrained service class, the control logic (5), <u>based on the rate at which the high-priority queue is serviced, can determine whether sufficient bandwidth is available</u>. If sufficient bandwidth is available, the control logic 5 calculates a schedule indicating time periods for receiving session data from the participating hosts according to the bandwidth required, and the control logic allocates a VLAN id for the session hosts (e.g. VLAN 1 for host set A and C), and records this in memory 6 against the service class to be applied for session transmissions.

In this regard, <u>Metin</u> specifically teaches a process of determining if sufficient bandwidth is available to forward session data for a <u>certain class of service</u> based on the rate at which a high priority queue is serviced, and not whether there is sufficient available bandwidth *to establish and allocate bandwidth for a reserved connection path within the network*, as claimed in claims 1 and 9.

For at least the above reasons, the combined teachings of Haddock and Metin fail to teach or fairly suggest various features of claims 1 and 9, and thus, claims 1 and 9 are patentable over said combination. Moreover, claims 2-8 and 10-12 are patentable over the combination of <u>Haddock</u> and Metin at least by virtue of their dependence from claims 1 or 9. Withdrawal of the obviousness rejection is requested.

<u>Claim Rejections – 35 U.S.C. § 102</u>

Claims 13-16 are rejected under 35 U.S.C. § 102(e) as being unpatentable over Metin. At the very least, <u>Metin</u> does not disclose or suggest a method for providing a reserved connection between end stations, in a network capable of providing prioritized communications, which includes a step of, e.g., *determining, by a first network switch device, whether sufficient bandwidth is available for establishing a reserved connection path; and, if so, establishing a reserved connection path between end stations in a network and reserving resources along the reserved connection path to provide the requested reserved connection along the reserved connection path, including allocating an output queue within said first network switch device for buffering reserved connection data packets to be transmitted on the reserved connection path* as essentially claimed in claim 13.

Indeed, for similar reasons discussed above, Metin does not expressly teach *determining whether there is sufficient bandwidth available to establish a reserved connection path within the network*, much less *allocating an output queue within said first network switch device for buffering reserved connection data packets to be transmitted on the reserved connection path.* Again, Metin is seemingly directed to a QoS framework where traffic is given relative precedence over other traffic in a network by using a plurality of classes of service (resource restrained class, normal class) where traffic within VLANs associated with the resource restrained class is forwarded with high priority, while traffic within VLANs associated with the Normal class is forwarded with low priority, namely the best effort system (see, para. [0038]). This is different from the claimed inventions where switches are designed to support a QoS framework for guaranteeing bandwidth through the use of a connection oriented approach, wherein connection paths are provisioned through the network and resources allocated along the path prior to traffic being forwarded on the path.

Accordingly, claim 13 is believed to be patentably distinct over Metin. Claims 14-16 and new claim 17 are patentable over Metin, at the very least, by virtue of their dependence from claim 13. Withdrawal of the rejection is requested.

Please charge the $120 fee for the Petition for the One-Month Extension, and any other costs that may be associated with the filing of this Amendment, to Deposit Account No. 07-0832.

Respectfully submitted,
THOMAS ANTHONY STAHL ET AL.

PPK:pdf

By: [signature]
Paul P. Kiel, Attorney
Reg. No. 40,677
(609) 734-6815

Thomson Licensing LLC
Patent Operations
P.O. Box 5312
Princeton, NJ 08543-5312

November 9, 2007